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從均衡飲食攝取足夠碘的簡單飲食習慣

Simple Dietary Practices to Get Sufficient Iodine from a Balanced Diet

食物安全中心風險評估組
科學主任林伏波博士報告

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碘缺乏是全球最普遍的微量營養素缺乏問題之一。這種必需微量營養素一定要從飲食，不論是天然還是強化食物中攝取。碘攝取量不足會影響甲狀腺激素的製造，對健康造成多種不良影響，統稱為“碘缺乏症”。值得注意的是，衛生署最近進行的全港性調查顯示，本港35歲或以上人士屬於碘攝取量不足和出現輕度缺碘。

本文將提供配合衛生署的“健康飲食金字塔”，在日常飲食中加入多種碘質豐富食物的實用方法（見插圖）。在飲食中採納這些簡便而有效的做法，能大幅改變碘攝取量，從而減低碘缺乏症的風險，促進一生的健康。

Iodine deficiency remains one of the most common micronutrient deficiencies worldwide. This essential micronutrient must be obtained through diet, whether from natural or fortified food. Inadequate iodine intake disrupts thyroid hormone production, leading to a spectrum of adverse health outcomes collectively termed iodine deficiency disorders (IDDs). Notably, recent [population-based surveys](#) conducted by Department of Health (DH) revealed that iodine intake was insufficient with mild iodine deficiency for local persons aged 35 or above.

This article provides practical ways for incorporating a variety of iodine-rich foods into our daily diets, aligned with DH's "[Healthy Eating Food Pyramid](#)" (see illustration). By adopting these simple yet effective dietary practices, individuals can make a big difference in their iodine intake, thus reducing the risk of IDD and promoting lifelong health.

每日攝取足夠碘為何重要？

碘缺乏症可始於出生前，對兒童的存活和智力健康構成重大風險。在懷孕期間嚴重缺碘甚至可導致胎兒夭折及先天異常。即使是輕度至中度

Why is it Important to Get Sufficient Iodine Every Day?

IDDs can start before birth, posing significant risks to children's mental health and survival. During pregnancy, serious iodine deficiency can even cause stillbirth and

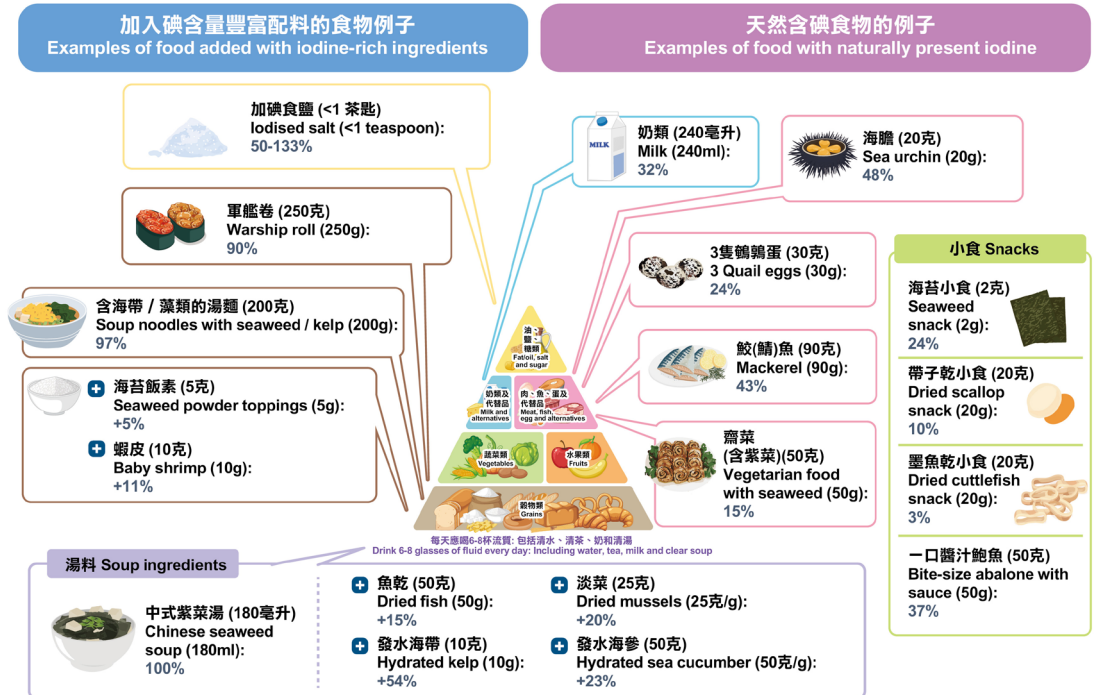


圖1: 依循“健康飲食金字塔”的均衡飲食而能符合150微克的每日碘攝入量建議的碘含量豐富食物例子
Figure 1: Examples of iodine-rich foods on meeting the recommended daily iodine intake of 150 µg/day following a balanced diet based on the “Healthy Eating Food Pyramid”.

缺碘已有可能更悄無聲息地導致神經認知功能受損，使人終身智商偏低。此外，碘缺乏是引致甲狀腺疾病，確切來說即甲狀腺功能減退的主要可預防因素。甲狀腺功能減退的症狀包括異常疲倦、感覺寒冷、反應緩慢、不孕、體重增加、大頸泡（甲狀腺腫）、流產及月經紊亂。

要避免碘缺乏，世界衛生組織（世衛）建議，6至12歲兒童的每日碘攝取量應為120微克，青少年及成年人應為150微克，孕婦或授乳婦女則應為250微克。

對市民攝取碘有何建議？

為審查本地及海外狀況和有關預防碘缺乏病的科學證據，及為本地預防碘缺乏病工作提出建議，衛生署、食物環境衛生署食物安全中心聯合成立了一個預防碘缺乏病工作小組，由來自醫管局、香港社會醫學學院、香港家庭醫學學院、香港婦產科學院、香港兒科醫學院，以及香港內科醫學院的代表共同參加。

預防碘缺乏病工作小組在[聯合建議](#)中重點提出兩項建議：(i) 選吃碘含量豐富的食物作為健康均衡飲食的一部分；(ii) 使用加碘食鹽，同時確保按照世衛建議每天食鹽的總攝入量少於5克。

立即行動，在均衡飲食中增加碘攝入量！

食安中心在上月報告了約300種[購自本港店鋪食物的碘含量](#)。插圖顯示，在飲食金字塔的不同類別食物中加入選定食物，可大大有助於達到150微克的每日碘需要量。

加入碘含量豐富配料的食物類別能奠定良好基礎

除了“奶類及替代品”和“肉、魚、蛋及替代品”天然含有碘，“穀物類”可作為碘含量高食物的有效載體。限制進食前兩個類別食物的人士可選擇加入含藻類的素食來增加碘攝取量。例如，

- 200克紫菜/海帶湯麵可提供每日碘需要量的97%
- 50克“素鴨”可提供每日碘需要量的15%
- 5克海苔飯素及蝦皮可分別提供每日碘需要量的5%和11%。

改善碘攝取量的其他策略

有數個實用方法，可進一步增加碘攝入量。首先，流質食物方面，一碗中式紫菜湯（180毫升）可提供碘需要量的100%。配製使用海鮮和藻類作為配料的湯，可大量增加碘含量，例如25克淡菜可提供碘需要量的20%。第二，含有海苔和海鮮的小食也可輕易補充膳食中的碘，因為2克海苔小食和20克帶子乾小食可分別達到碘需要量的24%和10%。最後，在金字塔的頂部，1茶匙（5克）加碘食鹽可提供碘需要量的50%至133%。若持之以恆，這些飲食上的改變可有效應對碘缺乏，同時維持飲食均衡。讀者可瀏覽食安中心[網頁](#)，以參閱碘含量的全面數據。

給消費者的建議

- 選吃碘含量豐富的食物作為健康均衡飲食的一部分，並使用加碘食鹽。
- 在飲食中加入碘含量豐富的配料。
- 採納實用方法，以進一步增加碘攝取量。如患病或有甲狀腺問題，應就碘的攝入量諮詢醫護人員。

congenital abnormalities. Perhaps more insidiously, even mild to moderate deficiency can lead to neurocognitive impairments, diminishing intellectual capacity across the lifespan. Furthermore, iodine deficiency is the leading preventable cause of thyroid diseases, specifically underactive thyroid (hypothyroidism). Symptoms of hypothyroidism include severe tiredness, feeling cold, slow response, infertility, weight gain, and an enlarged thyroid (goitre), miscarriage and menstrual disorders.

To prevent iodine deficiency, the World Health Organization (WHO) recommends the daily iodine intake as 120 µg for children aged 6 to 12, 150 µg for adolescents and adults, and 250 µg for pregnant or lactating women.

What is the Recommendation for the Public on Iodine Intake?

To review the local and overseas situation and scientific evidences on prevention of iodine deficiency disorders and to make recommendations for local situation for prevention of iodine deficiency disorders, a Working Group on Prevention of Iodine Deficiency Disorders (Working Group) was set up by the DH and Centre for Food Safety (CFS), Food and Environmental Hygiene Department, with representatives from the Hospital Authority, the Hong Kong College of Community Medicine, the Hong Kong College of Family Physicians, the Hong Kong College of Obstetricians and Gynaecologists, the Hong Kong College of Paediatricians, and the Hong Kong College of Physicians.

The Working Group on Prevention of Iodine Deficiency Disorders emphasises two key recommendations in its [joint recommendations](#): (i) consume iodine-rich foods as part of a healthy balanced diet; (ii) use of iodised salt while keeping total salt intake below 5 g daily as recommended by WHO.

Act Now to Boost Your Iodine Intake in the Balanced Diet!

Last month, the CFS reported the [iodine content of about 300 foods](#) obtained from local stores. The illustration demonstrates that by adding selected foods into different Food Pyramid food groups could significantly contribute to meeting the iodine needs of 150 µg/day.

Good Foundation Starts from the Food Groups Added with Iodine-Rich Ingredients

While the “Milk and Alternatives” and “Meat, Fish, Eggs and Alternatives” naturally contain iodine, “Grains” serves as a good vehicle for iodine-rich foods. Individuals who limit consumption of the first two food groups could increase iodine intake through adding seaweed-containing vegetarian options. For example,

- 200 g of seaweed/kelp soup noodles provides 97% daily iodine requirement
- 50 g of “mock duck” provides 15% daily iodine requirement
- 5 g seaweed powder and 10 g baby shrimp as toppings contribute 5% and 11% daily iodine requirement respectively.

Additional Strategies for Iodine Optimisation

There are several practical tips can further enhance iodine take. First, for fluid intake, a bowl of Chinese seaweed soup (180 ml) provides 100% daily iodine needs. Preparing soups with seafood and seaweed ingredients can add significant amounts of iodine, e.g., 25 g of dried mussels provides 20% iodine intake. Second, seaweed- and seafood-containing snacks can also supplement dietary iodine easily, as 2 g of seaweed snack and 20 g of dried scallop snack meet 24% and 10% of iodine requirements respectively. Lastly, at the tip of the Pyramid, a teaspoon (5 g) of iodised salt provides 50% to 133% daily iodine needs. These dietary modifications, when implemented consistently, can effectively address iodine insufficiency while maintaining nutritional balance. For comprehensive iodine content data, readers may refer to the CFS [webpage](#).

Advice to Consumers

- Consume iodine-rich foods as part of a healthy, balanced diet and use iodised salt.
- Add iodine-rich ingredients in the diet.
- Adopt the practical tips to further enhance iodine intake. Consult healthcare professionals concerning the intake of iodine if you have existing medical conditions or thyroid problems.

安全配製預先切開水果和果汁

Safe Preparation of Pre-Cut Fruits and Fruit Juices

食物安全中心風險傳達組
科學主任游天頌先生報告

Reported by Arthur YAU, Scientific Officer,
Risk Communication Section, Centre for Food Safety

預先切開水果和果汁因其便利性與清爽特性，提供享受新鮮農產品營養益處的便捷途徑，因此深受歡迎，尤其是在夏季。然而，世界各地不同地區均曾爆發涉及切開水果和果汁的大規模食物中毒事故，當中許多個案與在多個生產環節受致病微生物污染有關。若處理不當，這些食品可能引發嚴重的食源性疾病風險。本文將探討如何安全配製和處理供市面出售的預先切開水果和果汁，以確保消費者能安心享用。

了解相關風險

預先切開水果和果汁往往涉及人手多番處理，食用前一般不會經過加熱，因此屬高風險食物。若在配製期間處理不當，便會讓有害細菌存活的機會大增，並留存於最終產品中。需特別關注的主要病原體包括李斯特菌、沙門氏菌及產志賀毒素大腸桿菌，其對健康可能引起的風險包括腹瀉、發燒及情況嚴重者可能引致腎衰竭。此外，發霉或有損傷的水果或含有霉菌毒素，特別是棒曲霉毒素。舉例來說，棒曲霉毒素可持續留存於從受損的蘋果所製作的果汁，因而可能在人類引致噁心、胃腸道不適和嘔吐。了解這些潛在的健康風險並在整個生產過程中採取適當控制措施，可減少污染和變質，以確保這些食品的安全和品質。

配製預先切開水果和果汁的最佳做法

1. 選擇新鮮農作物

採購水果及蔬菜等農作物配料時，應向可靠的供應商採購，並選擇新鮮、無破損及表面沒瘀傷的農作物。來貨後，應仔細檢查水果，因為表面破損可能表示水果內部有問題。冷凍食材不應有曾置於不當溫度的跡象，例如在包裝上有滲水或液體污漬。

2. 妥善貯存

小心處理新鮮農作物，以免造成瘀傷或破損。把新鮮水果存放在雪櫃內，並跟生的食物分開存放，以防止交叉污染。把水果存放在陰涼乾燥的地方，最好放進溫度為攝氏4度或以下的雪櫃。漿果類和葡萄等極易變壞的食物應立即存放在雪櫃內。所有器具，包括即棄的器具，均應以清潔衛生的方式貯存。

3. 清洗水果

處理任何食物前，必須用清水和肥皂徹底清洗雙手。切開或榨汁前，應去除破損或發霉的農作物，如已腐爛便應棄掉。以流動的自來水徹底洗淨所有水果，並盡可能在專用洗滌槽中清洗。以乾淨的水果刷去除有硬皮的水果（如蜜瓜）表面的污垢。確保所有器具、器材及配製食物的工作面在使用前已清潔和消毒。

4. 切開和配製

使用清潔的刀和砧板切開水果。去除瘀傷或破損的部分，因為當中可能含有有害細菌。切開水果時，應留意水果內部有否發霉的情況，如有發霉，便應棄掉。用不同的設備和器具分開處理新鮮的即食農產品，以減少交叉污染。如配製果汁，應確保任何使用的器材（包括榨汁機和攪拌機）均已清潔和消毒。

5. 貯存預先切開水果

用密封的容器存放或保鮮紙緊密包裹已切開或去皮的水果，然後立即在攝氏4度或以下冷凍。不要把預先切開水果在室溫存放超過兩小時。如需用水或冰製作果汁，僅應使用食用冰塊或蒸餾水或已煮沸的食水。將剩餘的預先切開水果棄掉。

6. 供應和食用

配製好的預先切開水果或果汁最好立即奉客。如非即時食用，應置於清潔並且有密封

Pre-cut fruits and fruit juices are widely popular, especially during summer, due to their convenience and refreshing qualities. They provide an accessible way to enjoy the nutritional benefits of fresh produce. However, large-scale food poisoning outbreaks involving cut fruits and juices have been reported from various regions worldwide, with many cases linked to contamination during various stages of production with pathogenic microorganisms. Improper handling of these food products can pose significant risks, leading to foodborne illnesses. This article will discuss the safe preparation and handling of pre-cut fruits and fruit juices in commercial settings, ensuring consumers can enjoy them with confidence.

Understanding the Risks

Pre-cut fresh fruits and juices are considered high-risk foods because they often involve extensive manual handling and are typically consumed without undergoing heat treatment. This creates multiple opportunities for harmful bacteria to survive and exist in the final product if ill-handled during preparation. Key pathogens of concern include *Listeria monocytogenes*, *Salmonella* species and *Shiga toxin-producing Escherichia coli* (STEC) which can pose health risks like diarrhoea, fea and kidney failure in extreme cases. Additionally, mouldy or damaged fruits may contain mycotoxins, specifically patulin. For example, patulin can persist in juices made from damaged apples and can cause nausea, gastrointestinal disturbance and vomiting in humans. By understanding these potential food safety risks and implementing appropriate control measures throughout production, contamination and deterioration can be minimized, ensuring both the safety and quality of these products.

Best Practices for Preparing Pre-cut Fruits and Fruit Juices

1. Choosing Fresh Produce

When purchasing fruits and vegetable ingredients, always purchase from reliable sources and choose produce that is fresh, undamaged and free from bruises. Inspect fruits carefully upon receiving, as external damage may indicate internal issues. Chilled ingredients should be free from signs of temperature abuse, such as water or fluid stains on the packaging.

2. Proper Storage

Handle fresh produce with care to avoid bruising or damage. Store fresh fruits in the refrigerator and keep them away from raw food to prevent cross-contamination and avoid overloading. Store fruits in a cool and dry place, preferably in the refrigerator at a temperature of 4°C or below. Highly perishable items like berries and grapes should be refrigerated immediately. All utensils, including disposable ones, should also be stored in a clean and sanitary manner.

3. Washing Fruits

Always wash hands thoroughly with soap and water before handling any food. Before cutting or juicing, remove any damaged or mouldy produce and discard any rotten ones. Wash all fruits thoroughly under running water, ideally in a sink designated solely for this purpose. For firm-skinned fruits like melons, use a clean produce brush to remove surface dirt. Ensure that all all utensils, machines and preparation surfaces are cleaned and sanitised before use.

When cutting or peeling, store fruits in airtight containers or wrap fruits tightly in plastic wrap before refrigerating them immediately at 4°C or below. Do not leave pre-cut fruits at room temperature for more than two hours. If water or ice is required as an ingredient, use only food grade ice or distilled or boiled water. Discard any leftovers.

4. Cutting and Preparing

When cutting fruits, use clean knives and cutting boards. Remove any bruised or damaged areas, as these can harbour harmful bacteria. Check the presence of internal mould when cutting the fruits and discard the mouldy ones. Use separate equipment and utensils for handling fresh ready-to-eat produce to minimise the risk of cross-contamination. If preparing fruit juices, ensure that any machinery used, such as juicers or blenders, is also cleaned and sanitised.

5. Storing Pre-cut Fruits

After cutting or peeling, store fruits in airtight containers or wrap fruits tightly in plastic wrap before refrigerating them immediately at 4°C or below. Do not leave pre-cut fruits at room temperature for more than two hours. If water or ice is required as an ingredient, use only food grade ice or distilled or boiled water. Discard any leftovers.

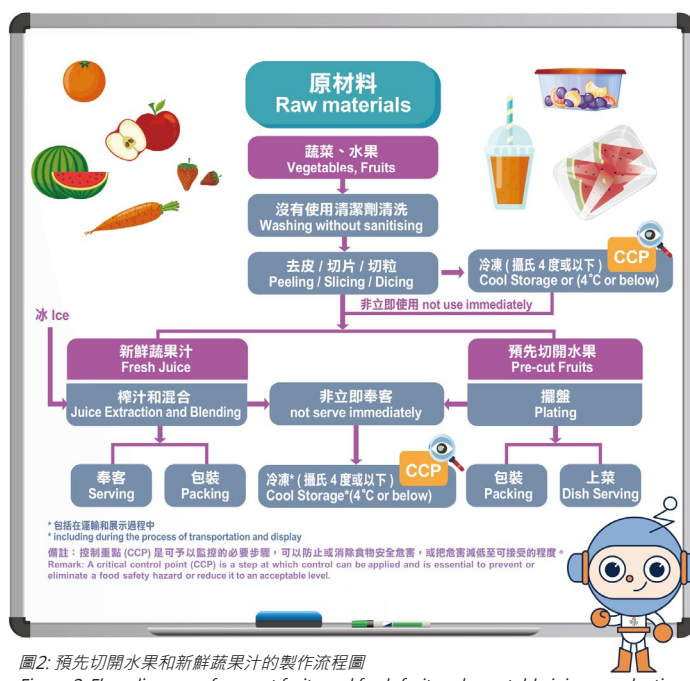


Figure 2: Flow diagram of pre-cut fruits and fresh fruit and vegetable juices production.

蓋子的容器內，存放在攝氏4度或以下，並列明“此日期或之前食用”日期。不要把預先切開水果或果汁在攝氏4度以上存放超過兩小時。保持展示範圍清潔，並定時檢查產品，如有變質的跡象，便應棄掉。

結語

預先切開水果和果汁需經人手多番處理，食用前往往不會經過加熱，因此嚴格遵循安全的處理方法至關重要。推行一個防患於未然的食物安全管理系統，如以“食物安全重點控制”系統為本的食物安全計劃，以在食物生產過程的每個環節中識別及控制食物安全危害。食物業界製作和售賣預先切開水果和鮮果果汁時，應嚴格遵行已制定的衛生及安全指引。請瀏覽食安中心網頁參閱整份指引，以獲取更多資訊。

6. Serving and Consumption

It is best to serve pre-cut fruits or juices immediately after preparation. If the products are not consumed immediately, store them in clean containers with close-fitting cover at 4°C or below and label them with a use-by date. Do not leave pre-cut fruits or juices at above 4°C for more than two hours. Keep the display area clean and inspect the products regularly and dispose of them if they have signs of deterioration.

Conclusion

Pre-cut fruits and fruit juices require extensive manual handling and are often consumed without heat treatment, making strict adherence to safe handling practices critical. Implementing a preventive food safety management system such as the HACCP-based Food Safety Plan to enable identification and control of food safety hazards at every stage of food production. Food businesses should strictly adhere to the established hygiene and safety guidelines when preparing and selling pre-cut fruits and fresh juices. For more information, please visit the CFS webpage for the full Guidelines.

切勿自行採摘野菇進食 Avoid Picking Wild Mushrooms for Consumption

最近發生了一宗懷疑食物中毒個案，受影響的一名患者自行採摘野菇進食後不久便出現病徵，須留院觀察。

野生菇類可能含有不同種類的天然毒素（例如毒傘肽和毒蕈鹼），可對健康造成嚴重影響，包括對器官造成永久傷害，甚至死亡。不過，香港以至全世界的菇類最常見的有毒媒體是腸胃刺激物，是本港大部分菇類中毒個案的成因。這些耐熱的毒素不能用烹煮或裝罐、冷藏或其他處理方法去除。菇類中毒最常見的症狀包括在進食後不久出現噁心、嘔吐和腹痛等急性腸胃症狀。

市民不應採摘野生菇類食用，因為要區分可食用和不可食用的菇類品種極不容易。如懷疑進食菇類引致中毒，患者須立即求醫，並帶同餘下的菇類以作鑒別。市民可參閱食物安全中心的單張，以獲取更多資料。

Recently, there was a suspected case of food poisoning involving a patient who developed symptoms shortly after consuming self-picked wild mushrooms, requiring hospitalisation for observation.

Wild mushrooms may contain various naturally occurring toxins (e.g., amatoxins and muscarine) capable of inducing severe health consequences, including permanent organ damage and fatal outcomes. Nevertheless, gastrointestinal irritants represent the most prevalent toxic agents in both Hong Kong and globally, accounting for most of mushroom poisoning cases locally. These heat-stable toxins cannot be removed by cooking or canning, freezing or other means of processing. Mushroom poisoning typically presents with acute gastrointestinal symptoms such as nausea, vomiting, and abdominal pain shortly after ingestion.

The public should not pick wild mushrooms for consumption as it is extremely difficult to distinguish edible mushroom species from inedible ones. In case of suspected mushroom poisoning, the patient should seek immediate medical attention and bring along any remaining mushrooms for identification. Please refer to the pamphlet of the Centre for Food Safety for further information.

在共享廚房安全配製食物 Safe Food Preparation in Shared-use Kitchens

共享廚房是食物製造工場以出租形式讓租賃者使用廚房空間和廚房設備。這些廚房在訂單數目急增的情況下，能為食物業營運者提供靈活的解決方案。然而，使用共用的設備可能會引起對食物安全的關注。為此，食物安全中心出版了共享廚房—給食物業的食物安全指引，來協助使用共享廚房的食物業營運者應對相關的食物安全風險。

領取有效食物牌照和批註是在共享廚房製造食物的先決條件。此外，有關持份者應保持廚房衛生。用具應使用殺菌劑消毒或浸泡在沸水中至少一分鐘。將生食與熟食和即食食物分開存放，以避免交叉污染。冷凍食物和冷藏食物應分別貯存在4°C或以下和-18°C或以下。此外，食物必須遠離化學品存放，以避免交叉污染。良好的記錄保存和監督對確保安全處理食物非常重要。

Shared-use kitchens are facilities that rent or lease kitchen spaces and provide access to kitchen equipment. These kitchens offer a flexible solution for food business operators (FBOs) to manage sudden surge in purchase orders. However, the use of shared facilities may raise food safety concerns. To this end, the Centre for Food Safety has issued Shared-use Kitchen - Food Safety Guidelines for Food Businesses to assist FBOs using shared-use kitchens in addressing the associated food safety risks.

Obtaining valid food licences and endorsements is a prerequisite for manufacturing food in shared-use kitchens. Besides, the said parties should keep the kitchens hygienic. Utensils should be sanitised by using bactericidal agents or immersing them in boiling water for at least one minute. Keep raw food separate from cooked and ready-to-eat food to prevent cross-contamination. Chilled food and frozen food should be stored at 4°C and -18°C respectively. It is also essential to store food away from chemicals to avoid cross-contamination. Good record-keeping and supervision are important in ensuring safe food processing.



風險傳達工作一覽（二零二五年三月）

Summary of Risk Communication Work (March 2025)

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給消費者的食物警報 Food Alerts to Consumers: 2	懷疑食物中毒個案通報 Suspected Food Poisoning Alerts: 0	教育研討會/ 演講/ 講座/ 輔導 Educational Seminars/ Lectures/ Talks/ Counselling: 37	上傳到食物安全中心網頁的新訊息 New Messages Put on the CFS Website: 50	